THE NEW YORK TEACHER,

AND

AMERICAN EDUCATIONAL MONTHLY.

MAY, 1868.

WHY WE ARE AN EDUCATED PEOPLE.

ASK the first ten native Americans you meet what is the source of the superior intelligence of our people, and at least nine of them will answer, "The Public Schools." Should the tenth harbor a doubt of the perfect truth of the reply, he will express it with the greatest caution, as though conscious of the unpopular if not unpatriotic nature of his thoughts. Talk to the nine about the faults or failures of our public schools, and five of them will look upon you as demented, or challenge you with the results—"the results, sir, of the magnificent system that you presume to complain of."

That there is another way of looking at the facts of the case, and one not entirely foolish, albeit less flattering to our professional pride, will be seen from the following extract from a Scotch Review.* The writer is commenting on the assertion of Mr. Fraser, in his report on education in this country, that the American people are, "if not the most highly educated, yet certainly the most generally educated and intelligent people on the earth," and that this is mainly due to the public schools.

"The word 'education,' as used by Mr. Fraser and by most people who write or make speeches on the subject, inclusive of Earl Russell, Mr. Lowe, and the Duke of Marlborough, is one susceptible of so many shades of meaning, that before the British public can admit the Americans to be better or more generally educated than the English, or before public opinion will support the establishment of a national system of education in this country, it is highly desirable that no mistake should occur, either as regards ourselves or others, as to what the word *education* really means. Education means 'drawing out.' The drawing out of what? The drawing out of the faculties. What faculties? The physical, the moral, and the intellectual faculties inherent in all mankind.

* *Blackwood's Edinburgh Magazine*, January, 1868.

Education begins with the human being very shortly after birth; and we have only to consider what any ordinarily intelligent child has learned before it is three years old, or has the slightest acquaintance with the alphabet, to be convinced that its education has been going forward very rapidly—perhaps more rapidly than it will proceed at any after period of its life. It has learned some of the elementary facts of physics: that a bird flies, that a fish swims, that men and quadrupeds walk or run, that a knife cuts, that fire burns, and that a fall from a high place upon the hard earth hurts. It has also learned that obedience is due to elders and superiors; and that there is a difference between love and hatred—between kindness and anger—between food and physic. It has also learned a vocabulary of the language of its parents and associates, sufficient to carry on the intercourse of life and the interchange of ideas—in fact, a greater number of words, and a greater command of grammar, than most men after forty or fifty years of age, who study a wholly foreign and unfamiliar language, can acquire in the same time. This, as far as it goes, is '*education.*' Take the commonest 'street Arabs'—the little homeless, or worse than homeless, children of our great cities—and it will be found that they also, who know nothing that is usually comprised under the name and with the common idea of education, are not wholly ignorant and uninstructed. They have all the physical knowledge that every child so speedily acquires, and a good deal of other knowledge—perverted, it may be, to wrong purposes, but of a kind that they could make useful if circumstances permitted. They know the value of money, of warmth, of shelter; and if suddenly transported into the Australian bush or the Far West of America, would know how to shift for themselves, and fight a battle for life that might ultimately convert them into as good citizens as the rough pioneers who, without having been street-Arabs, are engaged in extending civilization into the wilderness. Take an able-bodied seaman, who can neither read nor write, but who can perform all the duties of the ship, and is wise in the signs of the weather, and ask yourself whether you have any right, because he knows nothing of books and newspapers, to call him wholly uneducated. Take also the aboriginal inhabitant of the American, the African, or the Australian continent, all whose intellectual and physical faculties have been "drawn out" by the life of the prairie or the jungle and the society of his own people—an unlettered man, who can track the wild animals by a trail which the educated but much-reading citizen of a highly civilized community cannot detect—who has his own maxims, derived from the teaching and traditions of his tribe, as to his duties in war and peace, and the virtues of coolness in danger, and of heroic endurance under suffering; and though his only school has been the hard world, and books are less intelligible to him than the stars, yet you cannot say with truth or justice

that this man is uneducated. These examples will serve to show how and why it is that the great American people are, in one sense, more generally educated than the laboring classes among the English. They have an immense continent to subdue and replenish. There are land and a career for every man who will strike out from the overcrowded haunts of New England and the Atlantic seaboard, and do battle with the forest or the prairie for his daily bread. There is nothing to keep him down but his own sloth or vices. The land is not burdened with an overplus of desperate competitors. There are employment and reward and the chance of fortune for everybody who will do anything useful, and there would be this chance if the numbers of the people were tenfold greater than they are—provided, always, that they would cease, as the Irish do not, to encumber the great cities.

"It is because the Americans are such a busy people that they become such a generally educated people. The immensity of the task before them, in bringing their wide domain into cultivation, and in building up what promises to be the most powerful nation in the world, appeals so strongly to their imagination and their sense of responsibility, as to give them an air of sadness and thoughtfulness that strikes every stranger who resides even for a short while among them. They have the education of the mariner, the farmer, the miner, the explorer, the hunter, and the adventurer, as well as that of the trader, and sharpen their faculties in a thousand ways, that are not and cannot be open to the poor Englishman, in a country where the day's subsistence often costs more than the day's work. The scarcity of labor in America, and the difficulty of procuring help in the work of the farm, the mill, and the forge, develops the intellect of the people; and far away in the backwoods many an acute pioneer of civilization invents and patents some ingenious machine for rendering men and women independent of the hired service so costly and so difficult to obtain in a new country. The mechanical skill of the Americans is unequalled in the world, and never likely to be rivalled in the old countries of Europe, where labor is cheap. The Patent Office at Washington,—that marvellous repository of contrivances, from the simplest to the most elaborate machine that the cunning hand and the busy brain can construct—and all devoted to the one great end of facilitating work, and economizing manual and other bodily exertion,—is sufficient proof of the assertion, and of the practical and material, as distinguished from the scholastic, education of the American people. Book-learning and the common-school system have no doubt done something for them, but however great that something may be, it would have been less if it had not been for the fertile soil, the favorable climate, the immense extent of territory, and the gigantic and not half-developed resources of the continent. In fact, book-learning and what we thoughtlessly call

'education,' is about the smallest of the agencies which have made the United States so powerful. They owe their position, first of all, to their race and blood, and, secondly, to possession of the best portion of a continent, and the unrivalled opportunities thus presented, and by which they have known to profit. Their school-education, which enables them to read the newspapers, has certainly not impeded their progress; but without possession of such a glorious domain as that which their forefathers wrested from the Red Indians, their 'education' in the common schools, which they have so lavishly established, would never have received half the laudation which they, as well as foreign admirers, have been eager to bestow upon it. The school 'education' bestowed upon the children of Scotland, and introduced long before the Puritans founded the colony of Massachusetts Bay, is greatly superior to that bestowed upon the Americans; but it has not made an America out of North Britain, though it has certainly given America some of its best immigrants, in the persons of the well-instructed and 'go-ahead' Scotsmen, who are ever to be found among the leading and most influential citizens in every part of the United States and Canada.

"In the British Isles we live under different conditions. As a people we have never been indifferent to education, as the magnificent endowments of our universities, and of many of our charitable schools, such as Christ's Hospital, the Charterhouse, and others, which have been unjustly diverted from the intentions of their founders, abundantly testify. There are no opponents of education amongst us; none who do not consider it right and proper in itself, and expedient in the interest of the whole community, that every child born amongst us should be taught—not alone such elements and tools of knowledge as reading, writing, and arithmetic, but a great deal more. There is, perhaps, more culture in England than in any other country in the world; but at the same time, in consequence of our exclusive reliance upon voluntary effort, there is a greater residuum of ignorance than exist in Scotland, in Germany, in Sweden, in Norway, in Holland, in Belgium, in the United States of America, and in our American and Australian colonies."

The reviewer sees one side of the question: the eulogists of the schools see the other. Both are right and both are wrong. The schools are far from deserving all that is popularly claimed for them: they are still farther from being "the smallest of the agencies" which have made us what we are. Compare the South without schools, and the North with them; or as slavery made the conditions unequal, compare the Canadas before the establishment of schools, and the Canadas since that time, and it will be seen that "opportunities," however superior, have little influence on intelligence and prosperity, except when supplemented by the "book-learning" which the reviewer thinks so little of.

THE INTERVENTION OF GOVERNMENT IN EDUCATION.

England and the English Colonies.

IV.

IF, after having demonstrated the inefficiency of the English voluntary system, we wish to be still further convinced of the necessity of government intervention in primary instruction, we may examine the condition of popular education in an English colony, where we may observe the free development of two very different races, the Anglo-Saxon and the French. I refer to Canada. Before the organization of instruction by legislative appointment, the country was plunged in entire ignorance. Only the two principal cities, Quebec and Montreal, contained institutions where children of the wealthier classes acquired the elementary knowledge which they too quickly forgot. A traveller, Talbot, having journeyed through Upper Canada, at this period, states that during a residence of five years he saw but two persons with a book in their hands. "It is true," he adds, "that books are as rare there as apples on the mountains of the frigid zone." In Lower Canada, inhabited by the French, the ability to read and write was so rare, that more than one member of Parliament did not possess it. A Quebec journal proposed to found an adult school to impart this indispensable knowledge to legislators. One of the Governors of this time, Lord Durham, was astonished, on reaching the colony, to find that nothing had been done for the education of the lower classes. At last, in Upper Canada, the legislature, in 1841 and 1843, established a general system of primary instruction, supported by appropriations from the State and towns. We find here one of those men who, like Messrs. Barnard and Horace Mann, in the United States, devote an indomitable energy and a sound and well-trained judgment, aided by great administrative ability, to the work of national education. Rev. Dr. Ryerson, after having carefully studied the schools of Europe and America, published a report upon primary instruction in Upper Canada, the conclusions of which were ratified by Parliament. He borrowed from Germany its normal schools, from Ireland its system of religious instruction, and from the United States the important principle that the education of the people is a public duty, which must be provided for by taxation. An organization was thus established, which the Canadians are proud of, and with reason, if we may judge by the rapid progress that has been made since its adoption.

Each township is divided into sections of sufficient size to support a school. In each section the electors choose three trustees, who are invested with civil rights, and hold the school-property, with all the income

appertaining to it. This committee appoints the teachers, superintends instruction, levies the taxes voted for this object by the tax-payers, and really manages the whole matter, under the required condition that the schools shall be open at least six months in the year. A fund, consisting of a Parliamentary appropriation and an equal amount raised by assessment upon the landed property of each town, is distributed among all the sections in proportion to the number of pupils attending the public schools.

The schools are visited twice a week by inspectors, appointed by the council of the county, who are obliged annually to hold a meeting in each district, to stimulate even the remotest towns to fresh intellectual activity. Assembled as a committee, they examine candidates for the office of teacher, and give them diplomas. The ultimate authority is centred in two branches: the executive power, intrusted to the Chief Superintendent of Education, and the legislative power, exercised by the Grand Council of Public Instruction. The functions of the Superintendent are very important. He pays directly all the appropriations, and decides all the legal questions that may arise. To him are addressed all the reports of the local committees, which he sums up in a general report submitted each year to Parliament. We must note here a principle of administration borrowed from England. The English often intrust to a single official the entire charge of a department, with the right of directly appointing all his subordinates. In the tribunals, instead of a court composed of five magistrates, a single judge presides. When a question is to be discussed, they are willing to leave it to the intelligence of deliberative bodies or consulting-committees; but in administering and judging, they prefer to trust one man, because thus the responsibility of right and wrong is fastened upon one definitely-known person, and when the public have reason to complain they know whom to blame. Collective responsibility is but a feeble guarantee of good administration, while individual accountability is an excellent security. Besides, a competent chief of department will choose his employees better than the minister, for two reasons: first, because he is better acquainted with the qualifications that need to be combined in his subordinates, and because he has a direct interest in not making a bad selection, since he is held responsible for the results by both public opinion and the central authority.

The question of religious instruction in schools has here received a solution, which deserves to be noted, because it occupies a middle ground between the Irish and the American systems. It is not entire radical secularization as in the United States, and yet liberty of conscience is scrupulously respected. In no school are children required to read or hear any parts of any religious book whatever, or to join in any act of devotion without the consent of their parents. The teacher may not even impart religious instruction to those pupils who wish to receive it,

during the regular school-hours; but while he must not inculcate the dogmas of any particular sect, it is his duty to impress upon his pupils the general principles of morality and natural religion. "The system adopted in Ireland should serve as a model for Upper Canada. There, as the commissioners of Irish national education state, they endeavor to impress deeply on the children's minds a conviction of the necessity of religion; they strive to cultivate the moral sense and to awaken love of God and the emotions of sincere piety, while always avoiding any mention of the differences which characterize the various denominations. Our teachers should act in the same manner. Uniting example to precept, they will have for their ideal, piety, justice, and the sacred love of truth. They will stimulate patriotism, devotion to humanity, and universal benevolence. They will remember that sobriety, activity, frugality, chastity, and moderation are virtues as essential to the preservation of a nation's liberty as to the adornment of social life. Finally, so far as the intelligence of their pupils shall permit, they will explain to them the destiny of man and the obligations resulting from it, and they will thus secure their future happiness by cultivating their good impulses and inspiring them with abhorrence of every form of moral evil." This system, derived from the laws of Massachusetts, seems a good one. To trust the lay teacher to impart the moral and religious truths to which man is able to attain by the unaided power of reason, and to reserve to the clergyman the doctrines founded upon revelation—this is the method adopted to insure both the independence of the State and respect for liberty of conscience.

The Canadian Parliament and the school-districts have not shrunk from the pecuniary burden devolved upon them by the development of their educational system. While, in 1850, only £102,619 sterling were appropriated for primary instruction, £194,420 were devoted to the same object in 1856. In less than six years the sum was nearly doubled. The sacrifice rose nearly to the level of those made in the United States. For a population of 953,225 it was about ninety cents each. Appreciating the great importance of training good teachers, the legislature voted $125,000 to establish, at Toronto, a normal school, which Lord Elgin, the distinguished Governor of Canada, publicly dedicated, to the general satisfaction, on the 24th of November, 1852. In 1856 the number of masters increased to 2,622, with an annual salary varying from $280 to $1,500; and 1,067 female teachers, with a salary from $230 to $550. The number of pupils attending the common schools was 251,145, of whom 113,725 were girls—that is, 1 pupil to 7 inhabitants. Since 1857 the progress has been rapid. There has been an especially marked improvement in the quality of the instruction given, through the influence and good example of the graduates of the Normal School of Toronto.

As the complement of the common school, popular libraries, re-

sembling those of the United States, have been almost everywhere established. It is not enough to teach children to read, they need to be inspired with a taste for reading, and to have attractive and instructive books placed within their reach. The people of France and Belgium have of late begun to understand this, and in various places the most praiseworthy efforts have been made to establish these useful institutions. In Upper Canada—a country of Anglo-Saxon origin, where, consequently, they are not inclined to call in State intervention—they have not feared to have recourse to it, to aid in the establishment of public libraries, so highly is their utility esteemed. It is interesting to observe how the central authority and the local administrations have united their efforts, because we may perhaps find here a useful example. A special fund has been constituted—the public library fund—and the towns vote also a separate tax for the purchase of books. The Superior Council of Public Instruction has published a catalogue of more than six thousand works, that it can procure at a reduced price, because it buys so many of them. The school committee or town authorities send a list of the books which they wish to obtain, with the price annexed, and receive, besides the works for which they sent, other volumes worth an equal amount. The State thus pays half the expense, and the Superior Council, more intelligent than the local authorities, can select books for which the latter would not have thought of asking. A hall is appropriated to the public library, often in the school-house, and the teacher is appointed librarian. He is thus enabled to continue his own education, which teachers can rarely do in the country; and he can still direct the intellectual culture of his former pupils by the books which he recommends and loans to them. Libraries are the indispensable complement of schools; and following the example of the United States and Canada, individuals, towns, and states, throughout Europe, ought to vie with each other in efforts and sacrifices to establish them.

GRAMMATICAL NOTES.

IX.—Certain Uses of the Articles.

IN regard to the use of the different forms of the indefinite article, grammarians say, "*An* should be used whenever the next word begins with a vowel sound; *a*, whenever the next word begins with a consonant sound." And the rule is a just one. *A* and *an* are but different forms of the same word; and the only real reason for keeping up this difference is the fact that before a vowel sound it is easier to utter *an*

than *a*, and before a consonant sound to utter *a* than *an*. That is, if we may so say, *a* is the preconsonantal form of the word, and *an* the prevocal form. Hence, if the rule is to be followed at all, it should be followed invariably. Yet certain authors, without due consideration, teach that before words beginning with the sound of *h*, if not accented on the first syllable, *an* should be used rather than *a*. This may do well enough in England, where the sound of *h* in such words is practically suppressed; but for us Americans to write "*an* hotel," "*an* historian," "*an* harmonic scale," "*an* hiatus," "*an* hallucination," etc., is simply ridiculous. It is virtually saying in print that on our lips these expressions are sounded *an 'otel, an 'istorian, an 'armonic scale, an 'iatus, an 'allucination;* or else, that we have not independence enough to write as we speak, but must needs ape the English in their writing "*an* hereafter," because they say "an 'ereafter," just as they write "mine host" because they say "mine oast."* Consistency certainly requires all lovers of "*an* historical romance" and "*an* heroic character," to write and say, with Swift, "to an highwayman;" with Phillips, "an horrid chasm;" with Bloomfield, "usually esteemed an Hebraism;" with Dryden,

> "An host so great as covered all the field;"

or with Sir Walter Scott,

> "An hundred dogs bayed deep and strong,
> Clattered an hundred steeds along."

For ourselves, we are free to confess that we always say "a historian," "a hiatus," etc., sounding the *h* clearly and fully, and read them thus, even though printed "an historian," "an hiatus," etc.; for while we are not Cockney enough to say *'istorian*, or *'iatus*, we cannot make "*an* historian" or "*an* hermetically-sealed jar" pass between our lips any better than "*an* hermit" or "*an* hundred steeds."

2. Some writers and speakers have a careless way of using *half* as an adjective with an *a* both before and after it; as, "We had gone *a half a* mile or more," for "had gone half a mile," or "a half mile or more,"—the former being the preferable collocation. The following are examples of this impropriety: "We waited *a* half *an* hour for you." "A new church, *a* half *a* mile further west, on Asylum Hill."—*Hartford Rel. Her., July,* '64. "The force was encountered *a* half *a* mile or more from the railroad."—*Petersburg Expr., Aug.* 29, 64. "A few specimens taken from *a* half *a* page of his text."—*Mass. Teacher, June,* '65. "Thousands cannot construct *a* half *a* dozen consecutive sentences without violating some rule of grammar."—*D. H. Cruttenden.* Similar to these

* We do not mean to say that English writers invariably do this; but that it has been and is their general practice.

are such examples as, "I want you to use the gargle *every* half *an* hour;" "What a comment is *every* such *a* scene upon the iniquity," etc.—*N. Y. Times, Aug.* 31, '63. Here, of course, the *an* or *a* is superfluous, and should be omitted.

3. Some object to the phraseology, "What kind of *a* noun is 'man'?" "What sort of *an* apple have you?" as well as, "Frederick William I. was *a* very odd sort of *a* king." The latter, we should say, unhesitatingly, is wrong; but the former we consider correct. The grammars that refer to this using of *a* or *an* in connection with *kind* or *sort*, so far as we have observed, make no distinction between these two cases. Correct writers, however, generally make a distinction, as we might show, did our limits permit. The first two of the above sentences, it will be observed, are introduced by *what*. In regard to such sentences, we should say, if the expected answer requires an *a* or *an*, the *a* or *an* should be introduced after *sort* or *kind;* if not, it should not. Thus, in answer to "What kind of *a* noun is 'man'?" one would naturally say, "*A* common noun." In answer to "What sort of *an* apple have you?" one would say, "*A* pippin," or "*A* sour apple," or "*An* excellent apple," according to the supposed intent of the inquiry. If the noun after *sort* or *kind* is an abstract noun, or a noun denoting material, the article should not be used in the question any more than in the answer. Thus: "What sort of wood have you?" Ans. "Ash," or "Oak," or "Kindling wood." To illustrate the two cases by a single word, we may ask, "What sort of division is that?" the natural answer to which would be, "Long division," or "Short division." Or we may ask, "What sort of *a* division is that?" in which case the answer would be, "*An* equal division," or "*A* natural division," or "*A* political division," or "*A* strange division," or something similar. If, instead of "A strange division," we should say, "A strange sort of division," we should still use the *a*, but use it before *sort* instead of after it, as in the question. Having used it before *sort*, it would be improper to repeat it after *sort*. This explains the impropriety of saying, "Frederick William I. was *a* very odd sort of *a* king." It is not, as Mr. Kerl's language implies (Com. Sch. Gr., p. 279), *because* "a kind or sort is comprised in the general class, rather than in a single object;" but because a second *a* would be merely a repetition of the first *a*. Though it is true that "a kind or sort is comprised in the general class rather than in a single object," yet it is well known that a single object often represents the class to which it belongs. Hence, while, with Mr. Kerl we should say, "Man is mortal," rather than "A man is mortal," to denote that all men are mortal, we should also say with him, "*A* pronoun is a word used," etc., rather than "Pronoun is a word used," etc.; not that we mean, any more than he does, some individual pronoun, but "the general class" of words called pronouns.

We should remember that *a* or *an*, besides being a distributive, as in "Twice *an* hour," "Four dollars *a* day," denotes sometimes mere individuality—"I have *a* horse;" and sometimes a class or kind—"*A* horse differs from *a* man." Hence the propriety of its use after *what sort of* or *what kind of*, when individuality as well as kind is referred to.

The following are examples from Irving, illustrating his practice on this point. 1. *A* after *kind* or *sort*. "What kind of *a* man was your uncle?"—*Traveller*. "Two simple country girls, desirous of seeing what kind of *a* beast it was, applied for admittance."—*Salmagundi*. 2. *A* before but not after *kind*. "It was *a* kind of state-apartment."—*Traveller*. "The great chasseur acted as *a* kind of sentinel or guard."—*Do*.

If the above reasoning, and the examples given in illustration of it, are correct, then not only is the phraseology of this sentence wrong—"*A* bear, my friends, is *a* very grave kind of *a* personage,"—but that of such sentences as these:—"What kind *of wind* is here referred to? Ans. *A* tempestuous wind, *a* hurricane." "What sort *of hat* did the prisoner wear? Ans. *A* slouch hat." "He is asked what sort *of word* each is; whether *a* primitive, *a* derivative, or *a* compound."—*G. Brown*.

4. *Other* is one of those words with which the articles are very frequently misused. We refer particularly to the following cases:

a. When *other* is preceded by *one* denoting a particular one of two objects or classes of objects. In this case both *one* and *other* should be preceded by *the*. Thus, "Two men went up into the temple to pray; the one [that is, not *either* one indifferently, but a particular one of the two] a Pharisee, *the other* a publican." Macaulay says, "During the latter half of the seventeenth century there were [in England] only two minds which possessed the imaginative faculty in a very eminent degree. *One* of those minds produced the Paradise Lost, the other the Pilgrim's Progress." This should be "*The one* of those minds," for the reference is not to *either* of them, but to a particular one of the two. In speaking of Byron's poetry, however, he says correctly, "It touches the Essay on Man at *the one* extremity, and the Excursion at *the other*." Dr. Campbell, too, in his Rhetoric, speaking of the difference between moral and demonstrative evidence, says, very properly, "In *the one* [that is, not in either of them indifferently, but in demonstrative evidence] there never can be any contrariety of proofs; in *the other* there not only may [be], but almost always is."

b. Where *other* is preceded by *one* denoting either of the two objects or classes of objects. In this case *other* should, but *one* should not, be attended by *the;* as, "That kind of period which hath most vivacity, is commonly that wherein you find an antithesis in the [two] members, the several parts of *one* that is, either one] having a similarity to those of

the other."—Campbell's Rhet. This structure is very often neglected. Examples: "If two triangles have the three sides of *the* one equal to the three sides of the other, each to each, the triangles will be equal in all their parts." The article before *one* here is improper, because the reference is to either of the triangles. So in the following sentence from Marcel on Language: "When two languages differ much in their genius, the grammar of *the* one cannot teach the grammar of the other." "All deductive evidence is derived from one or *other* of two sources."—*Campb. Rhet.* *One* here is correctly used without *the;* but after referring to one of the sources, *other*, which refers to the remaining one, needs a *the.* Similar to this is the following sentence from Salmagundi: "The ladies have begun to arrange themselves under the banner of one or *other* of these heroines [Mrs. Toole and Madame Bouchard] of the needle." A certain writer speaks of "sentences in which two things are compared with one *another*," instead of "compared one with *the other.*" Sanborn (Gram.), similarly misusing words, says, "Sometimes one article is improperly used for *another*," as though there were more than two articles.

c. When *other* is preceded by *one* denoting any one of three or more objects, or of an indefinite number of objects. In this case *one* should not be preceded by an article, and *other* should be *another.* Thus, "Perils lay thick on the right and on the left, and to keep far from *one* evil was to draw near to *another.*"—*Macaulay, Engl.* "Every part of speech can be used one for *another.*"—*Marcel.* "Every outburst of feeling implies that we have passed from *one* condition to *another.*"—*Bain, Rhet.* The following sentences afford examples of improprieties under this head. "Each of these aquatic hills formed two or three distinct eminences, one above *the* other." Had the writer spoken of but two eminences, "one above the other" would have been correct; but speaking of "two or three," he should have said "one above *an*other." "It can not affect the cause either one way or *the* other." Referring to one of several ways, the writer should have used "another" for "the other." Had he referred to one of two ways, his sentence should have been, "It can not affect the cause either way." "One after *the* other the [several] grounds upon which Great Britain founds the theory of intentional wrong, are cleared away."—*N. Y. Times.* "Synonyms will generally be found not to stand as perfect equivalents one for *the* other."—*Marcel.* "Religious ideas of one kind or *other* are almost if not quite universal."—*Herbert Spencer.* Say, "one kind or *another*," or "*some* kind or other." "Iconium lay on the borders of Lycaonia, Phrygia, and Pisidia, and therefore it might sometimes be assigned to *the* one province, and sometimes to *the* other."—*Kendrick Olshausen.* Sometimes "to the one," and sometimes "to the other" of the three! "The Ægean Sea is studded

with islands, inviting the timid mariner from one to *the* other."—*Dr. Smith's Hist. of Greece.* "The distance from one daughter's house to *the* other [of the three] was 148 rods."—*Greenl. Nat. Arith.* This should have been "from one daughter's house to *another*," or "from one daughter's house to the *others*' was," etc.

d. When *other* is preceded by *some*. In this case it should not be attended by either *an* or *the;* as, "He will never leave thee till he hath ta'en thy life by *some* indirect means or *other*."—*Shak.* "*Some* how or *other*, our great geniuses are not gregarious."—*Irving.* Careless or ignorant persons sometimes say, "for some reason or *another*," or, worse still, "somehow *another* he failed." "Some —— or other," is the correct form of the expression.

Postscript.—It is usual to write *somehow*, *somewhere*, *somebody*, etc., as one word. Properly, however, these expressions consist of two words, and ought to be written as two words. Then in parsing such a sentence as "Some how or other, he is always successful," we should not be tempted to call *other* an adverb, any more than in the sentence, "Some person or other must do it." The same remark may be made in regard to the orthography of *nowhere*, *anywhere*, *anyhow*, *forever*, etc.; better write them as two words, considering the latter part of each as a noun, or an adverb pronominally employed, as in the case of "from *above*," "till *now*," "at *once*," "I will speak but this *once*," "from *hence*," "to *where*," etc. Compare "for *ever* and *ever*," and "for *ages* and *ages*."

THE SMITH FAMILY.

Chapter V.—The School.

ALL children are educated. If parents or governments do not supervise their instruction, they attend to it themselves.

Filth and crime are lessons readily learned. Lying, swearing, stealing, and fighting are portions of the education of many of the little ones of our cities. The tax paid for their book-learning is nothing to the sums we are compelled to disgorge as prizes for their proficiency in these accomplishments in their after-life.

Dempster's Court, the school in which the Smiths are being educated, was originally built for stabling, when Gower-street was tenanted by the semi-aristocracy; but when that street lost its prestige, most of the buildings not being required for horses were transformed, by a speculator

named Dempster, into tenements for human beings. Two of them, however, still retain their original form, one being occupied by a cab-man, and the other by a green-grocer and coal-man. The size of the court is about a hundred and fifty feet by twenty. It has two narrow outlets, one leading into Gower-street, the other into Tottenham-Court Road.

Like all such localities, Dempster's Court swarms with children. Ten to twenty can be counted in it at any time between sunrise and sunset. It is not considered particularly unhealthy by the people who live there, probably because they have more cause to be troubled about life than about death. It is said, that during the past winter one old woman did die there of non-consumption. In summer three special miasmas are generally on hand there, one being created by a dog's-meat man, who boils his carrion every two days; another, formed by the refuse of the green-grocer's store at the end of the Court; and the third proceeding from two horse-manure heaps piled outside the stables.

Of course around these centres of filth the little children prefer to collect, and about every hour one of the mothers sallies forth, and a child is heard giving tone in consequence. Cruel, hard, and wicked words form the staple conversation of their elder brothers and sisters, which the little ones list to and learn.

There are not more than twenty small tenements in the Court, and many of them have something exposed for sale. There is a grocery, which, being unlicensed, cannot sell tea, coffee, pepper, tobacco, or snuff, those being excisable articles. Rancid butter, red herrings, a few sticks of candy in a glass jar, ballads, candles, matches, and firewood in small bundles, are about the whole of its stock. The contents of the draper's store any stout peddler could easily carry. In addition to these, there is a green-grocer and coal-man, a cobbler, and an Italian image-vender, who has over his door, "Likenesses taken of the living and Diseased."

School is in now, although it is not over half-past seven, A. M., for instruction in such places extends throughout the day and sometimes throughout the night. The baby, whose birth was recorded, is now a month old, and mother and child are well: Fanny has lost her situation as bookfolder, having to stay at home to attend to it. John, the eldest boy, has gone to his duty at Mr. Moggs', the stationer, where he earns four shillings a week, but as he has much walking to do, half of it goes for shoes. The father is at his bench in his shop. The rest of the family are in the Court. Of course the two youngest are in the mud and dirt, which dribbles in a filthy stream down the centre of the Court. Several children are standing round the green-grocer's store, watching for the refuse vegetables which he discards every morning as unsalable:

even in such deeps there is one still lower, and many a cruel combat has occurred here for the possession of such prizes. But there is a cry in the Court; and very soon four or five women are heard all talking at once. The cobbler's bull-*tar*rier, as he calls it, has attacked one of the children. An amazon is screaming, with violent gesticulations, "Take the la' on him, Mrs. Nevins!" Another woman adds, "If I was her I'd pison the nasty brute." The poor cobbler kicks the dog into his shop, and shuts the door; he can't afford to answer his customers saucily. On examination, the child, who is adding its screams to the uproar, is found to be unharmed, though its clothing has been considerably torn.

The turmoil is soon over, and the women disperse—some to their rooms, and others, Mrs. Nevins amongst them, to talk over the affair, and heal their lacerated feelings with a quartern of gin at a tavern round the corner. The green-grocer and the cabman philosophically pay no heed to the row, the former being engaged in his morning's occupation of sweeping out his store, whilst the latter continues grooming his horse, and solacing himself with the peculiar hissing sound which usually accompanies that operation.

There are yet two other occupants of the Court who have been unconcerned spectators of the fray. One is poor Billy, who is lying snugly on the hay in the Cabman's stable, amusing himself with a feather he has found, and occasionally tickling his black friend Bunty with it, now and then emitting through his lips a low, moaning, uninditable sound. The other is his brother Peter, who is playing at pitch and toss with a butcher-boy in one of the entrances to the Court. As the women return from the tavern, Mrs. Nevins looks at him sharply, and says (probably by way of balancing her gin sin), "Oh! you bad boy, if your poor mother was well you'd catch it!" Peter answers her by putting his thumb to his nose, and performing at her the classical operation called taking a sight.

Peter is a sharp fellow, and will, doubtless, one of these days make a capital financier. He has already passed bad money on the poor old candy-woman in the road, and taken a belting from the green-grocer for stealing his turnips. His ridiculous dress, which almost dehumanizes him, proclaims him to be what is called in London a charity boy. His stub-tailed brown jacket, ornamented with large metal buttons, his drab knee-breeches, buckled shoes, and comical cap, proclaim in his person what is done by the left hand of St. Winifred's Church.

Probably in proof of his freedom from all religious restraints, the butcher-boy swears horribly at every turn of the game. Peter talks less but cheats more, and in the end defeats his opponent. The latter thereupon shows fight, but Peter declines—not from fear of the consequences to himself, but from motives of delicacy with regard to his

clothing. So, with a volley of obscene slang, the other young reprobate shoulders his tray, and departs.

Peter has been guilty of a double crime, gambling and loitering in his duty. He has a job on hand every five days. It is to wheel Mrs. Field's spaniel dog, which is a confirmed invalid, round Regent's Park, for which he gets sixpence a trip. Most boys would object to such work, but Peter has been too long

> "A fixed figure for the hand of Scorn
> To point its slow unmoving finger at,"

to care for any observations about his employment. He rather glories in the degradation attending it. Besides, if Peter does shirk his duty, in order to play a game or two, dogs, like dead men, tell no tales.

Whilst this has been performing, an old lady, who looks like an antiquated Ann Boleyn, has been gazing into the Court. Gently rubbing her hands, and devoutly elevating her eyes, she exclaims, "Ah! the precious lambs, see how they perform their duties in that station in life into which it has pleased God to call them."

In the House of Lords a radical nobleman rises from his seat, and addressing the Keeper of the Queen's Conscience, remarks, "Is your Lordship aware that the Smiths are starving?" The Lord Chancellor, opening his eyes, exclaims, "Eh? ah! Well, send them to the workhouse!"

Shortly after another member approaches him on the other side with, "Positively, my Lord, I do believe the Smiths are stealing!" "Well, well," replies the Conscience Keeper; "in that case send them to prison. What is it to me what the Smiths do, so long as they order themselves lowly and reverently before my wig." Having so said, he comfortably settles himself on the woolsack for another nap.

If young men come to this institution having some dissimilarity of character, I want them to be allowed to retain their individuality. I sympathize with all my heart in the remarks made concerning æsthetic culture. But if a young man comes here with the lion in him, do not begin to pare his nails, or trim his mane, or tone his voice, or tame his spirit; but let his claws grow, let his teeth lengthen, let his mane thicken, let his eye brighten, let his thunder deepen, let his spirit wax till by his roaring he sends terror to all the haunts of wickedness, and dismay to all the dens of iniquity. There is just as much that is æsthetic in the lion as in the lap-dog. We want some majesty, some sublimity, some grandeur, some glory, as well as beauty.—*Bishop Janes* (at the opening of the Drew Theological Seminary).

EMINENT FOREIGN EDUCATORS DECEASED IN 1867.

II.

THOMAS RICHARDSON, Ph.D., F.R.S.L. & E., etc., died at Wigan, England, of congestion of the brain, July 10. He was born in 1817, and was regarded as one of the ablest practical chemists and technologists in Great Britain. He had been for some years reader in chemistry in the University of Durham, and was widely and favorably known both by his frequent contributions to the *Chemical News* and *Chemical Gazette*, and by his great and valuable work, "Richardson and Watts' Chemical Technology."

CHRISTIAN AUGUSTE BRANDIS, professor of philosophy in the University of Bonn, Prussia, died in that city, July 24. He was born at Hildesheim, Hanover, in 1790, studied at the universities of Kiel and Göttingen, was for a time private tutor at Copenhagen, where he formed the acquaintance of Niebuhr, whose secretary of legation he was in 1816, returned to Berlin and prepared a critical edition of the works of Aristotle. In 1821 he was appointed professor of philosophy at Bonn, and continued in the discharge of its duties for more than forty-five years. In this period he wrote numerous philosophical treatises and essays, and a "History of Greek and Roman Philosophy," a work of vast research.

Rev. Dr. DEWAR, principal of Mareschal College, Aberdeen, and professor of church-history, until the colleges of Aberdeen were united a few years ago, died at Over Durdie, Errol, Scotland, in July. He was born in 1787.

AUGUST BOËCKH, J.U.D., an eminent German philologist, archæologist, and professor for sixty years, died in Berlin, Prussia, August 3. He was born at Carlsruhe, November 24, 1785; took his degree at Halle in 1807, and was immediately appointed professor of Greek in the University of Berlin. He was the foremost classical scholar of Germany, and chancellor of the Order of Merit for Sciences and Arts. He was the author of numerous classical and philological works.

LOUIS ALTIERI, cardinal-bishop of Albano, died at Albano, near Rome, August 11. He was born in Albano in 1805, and had been for some years grand-chancellor of the University of Rome.

BASILIO MANUEL ARILLAGA, superior of the Society of Jesus in Mexico and rector of the College of San Ildefonso—an eminent scholar, died in August, in the city of Mexico, where he had been imprisoned for political causes. He was born in 1787.

MICHAEL FARADAY, D.C.L., an eminent physicist and chemist, died in London, August 18. He was born in Newington, Surrey, September 22,

1791. He was apprenticed to a bookseller, and continued in that business till 1812, but was from boyhood fond of natural science. In 1813 he was appointed chemical assistant to Professor Brande in the Royal Institution, and soon made numerous brilliant discoveries. In 1820 he discovered the chlorides of carbon, and the year following the mutual rotation of a magnetic pole and an electric current; in 1823, the condensation of gases; in 1831 and following years, the development of the induction of electric currents, and the evolution of electricity from magnetism. The establishment of the principle of definite electrolytic action, the discovery of diamagnetism, and the influence of magnetism upon light, obtained for him, in 1846, the Rumford medal and that of the Royal Society. In 1847 he announced to the world the magnetic character of oxygen, and the magnetic relations of flame and gases. When the chemical professorship was founded in the Royal Institution in 1833, Faraday was chosen professor, a position he filled till his death. He was the author of many scientific papers.

Edward Hodges, Mus. Doc., died in Bristol, England, about the 12th of September. He was an eminent composer, organist, and teacher of music. He was born in Bristol, England, but for many years was a resident of New York city, where he was organist to Trinity Church, and the instructor of many eminent organists and composers.

F. Dübner, an eminent Greek scholar, born in 1808, died suddenly in Paris, October 12. He had devoted his whole life to the study of the Greek language and literature, and to the editing of the Greek classics for instruction in colleges and universities. More than twenty of these classics had been published with his signature.

Franz Bopp, Ph.D., ordinary professor of Oriental languages at Berlin, and founder of the science of comparative philology, died in Berlin, Prussia, October 23. He was born at Mainz, September 14, 1791, educated at Göttingen, Paris, and London, and devoted himself, before he left the first-named university, to the study of Oriental languages and literature. He remained in Paris some years, prosecuting his Oriental studies, sustained in part by a small pension granted him by the king of Bavaria. He early commenced the publication of works to facilitate the study of the Oriental languages, but his great work, and one on which the best years of his life were spent, was the preparation of his "Comparative Grammar of the Sanscrit, Zeno, Greek, Latin, Lithuanian, Old Sclavonian, Gothic, and German Languages," in which, by a rigid analysis and comparison, he has demonstrated the common origin of those which are now known as the Indo-Germanic languages, and laid the foundation for a more comprehensive study and comparison of the principal languages of the world than had previously been possible. He was appointed professor of Oriental languages in the University of

Berlin, and held the position till April, 1867. He was the author of numerous philological works.

Right Rev. JOHN STRACHAN, lord-bishop of Toronto, died in that city, November 1. He was born in Aberdeen, Scotland, April 12, 1778, and educated at King's College, Aberdeen, and at the University of St. Andrews. In 1797 he commenced teaching in the parish school at Kettle, Scotland. In 1799 he came to Canada, on the invitation of Governor Simcoe of Upper Canada, to establish a university and grammar-schools in the province. This design was relinquished before his arrival, however, in consequence of the removal of Governor Simcoe from the province. For the next thirteen years he was constantly engaged in teaching, but meanwhile had taken orders in the English Church. In 1812 he was appointed rector of Toronto (then called York) and by royal warrant made an executive councillor and a member of the legislative council. Thenceforward his whole life was largely devoted to the promotion of education. He founded both the universities in Toronto, obtained endowments for them, and established also twenty grammar-schools of high grade in the province. He was consecrated bishop in 1839, and held the see until his death.

Dr. JOHN OGILVIE, an eminent Scottish teacher and author of educational works, died in Aberdeen, November 21. He was a native of Banffshire, born about 1802, and educated at the University of Aberdeen. After completing his university course, he devoted himself to teaching, and was for upward of thirty years mathematical master in Gordon's Hospital, from which position he retired in 1858. He was the author of the "Imperial Dictionary," the "Student's English Dictionary," and several other text-books.

Professor CHARLES GILES BRIDE DAUBENY, M.D., an eminent English physicist and teacher of the natural sciences, died at Oxford, England, December 13. He was born at Stratton in 1795, educated at Winchester and Magdalen College, Oxford, attaining high distinction as a scholar, especially in the classics. He studied medicine, took his degree, and practised for some years in Oxford, but in 1829 relinquished his profession, and devoted himself especially to chemistry and botany. In 1822 he was elected professor of chemistry, and retained that office till 1855. In 1834 he was appointed professor of botany, and the professorship of rural economy was attached to this in 1840. These appointments he held till his death. He was also prælector of natural philosophy in Magdalen College and curator of the Botanic Garden. He was one of the founders and an active member of the British Association for the Promotion of Science, repeatedly one of its officers, and its president in 1856. He was the author of many valuable scientific works.

JOHN HANNAH, D.D., an eminent Wesleyan minister and professor of

theology, died in Didsbury, England, December 29. He was born in Lincoln, England, in 1792, became a Wesleyan itinerant minister in 1814, and in 1834 was chosen theological tutor at the Wesleyan Training Institution, then just established at Hoxton, and in 1842 was removed as professor to the Wesleyan College at Didsbury. He was for thirty-three years the chief instructor of the young Wesleyan ministers, and during that time had trained more than three hundred preachers. He was also twice president and eight times secretary of the London Wesleyan Conference.

The following medical and surgical professors and teachers died during the year in Europe :

JOHN GOODSIR, professor of anatomy in the University of Edinburgh, and a lecturer of remarkable eloquence, died in that city, March 6, aged fifty-two years.

SIR STEPHEN LOVE HAMMICK, lecturer on surgery and for many years examiner in surgery in London University, died in London, June 15, aged ninety years.

JEAN CIVIALE, an eminent French surgeon and professor, died in Paris in June, aged seventy-one.

SIR WILLIAM LAWRENCE, F.R.S., M.R.C.S.L., professor of anatomy and surgery, and president of the Royal College of Surgeons, died in London, July 5, at the age of eighty-four years.

ALFRED ARMAND LOUIS MARIE VELPEAU, the most eminent of French surgeons, and professor of surgery in the Academy of Medicine, Paris, died in that city, August 25, aged seventy-two.

M. —— CHARTROULE, a French physician and professor of diseases of the chest, in the French Academy of Medicine, died in Paris in October.

SELF-STUDY THE DUTY OF TEACHERS.

TO know one's self thoroughly, in view of every human and divine relation, is the legitimate end of true knowledge. And in no position in life is self-knowledge of greater importance than in the relation we sustain as teachers.

The civil law says, "Know arithmetic and grammar, geography and writing;" the *higher law* says, "Know thyself." The commissioner commands the study of *physical* science; the higher and nobler impulses of study demand careful attention to *mental* science. The most important item in the organization of a school is very frequently overlooked.

The teacher fails to recognize the fact that *self*-organization stands first and foremost in the line of duty. And this work is deeper and of far greater magnitude than is generally supposed. It is not, it cannot be, the work of a day. Self organization and culture demand self-knowledge. It is said that very little can be known of mental science, at the best. This may be true of physical science also. If little can be known, it follows that this little should be well known. Emerson has said that the history of one man is the history of the world. If we know ourselves thoroughly, we become acquainted also with our neighbors. All souls are similar in very many essential respects, though dissimilar in non-essential details. If you desire to raise wheat upon some lands, you will have to pursue a special plan of culture. If corn is desired, a peculiar kind of tillage will be necessary. That education is very imperfect which neglects mental culture as a direct and special work.

In the preparation supposed to be necessary to qualify a teacher for his important work, self-organization is left out of the question; except we take it for granted that a thorough knowledge of what is termed physical science brings with it thorough mental culture, which is not substantiated by matters of fact. Some of the best linguists and mathematicians we have ever known, seemed very much to lack self-organization.

But regarding the mind as the soil upon which the teacher is called to work, the importance of knowing all that can be known of its laws, and the philosophy of its development, becomes very apparent. And if the teacher has studied himself, he has been studying all his pupils. The perceptive powers—those avenues to the soul—demand, first of all, the attention of the teacher. Nothing is of greater importance than that the windows of the soul be kept clear and unobstructed. The senses must not be perverted or misused. For it is by means of these that life-lessons are given to the memory. The ears need to be trained to distinguish sound; the eyes must be taught to discriminate in regard to objects in the world around: touch, taste, and smell demand the fostering attention of intelligent instruction. And when, through these avenues, we have reached the mind, then the important work of mental development is presented. How can it be expected that the teacher can successfully and properly cultivate a soil, the nature of which he has not studied? He may have a storehouse full of seed to scatter, but ignorance of the laws which regulate its germination and growth, may make his labors fruitless. If he has studied himself, if he understands the laws of his own mind, so far as intelligent investigation can reveal them, then he understands the minds of his pupils. But how much labor is lost, how much effort is scattered and wasted, through ignorance of the nature of the soil!

*UN*INTELLECTUAL ARITHMETIC.

THE method of solving examples in Mental Arithmetic, approved by the authors of text-books and generally practised in our schools, is illustrated in the following question and solution :

"If 12 hats cost 60 dollars, what will 4 hats cost?" *Analysis :* "If 12 hats cost 60 dollars, one hat will cost as many dollars as 12 is contained times in 60; that is, 5 dollars: if one hat cost 5 dollars, 4 hats will cost 4 times 5 dollars; that is, 20 dollars:—therefore, if 12 hats cost 60 dollars," etc.

The student is taught to use this kind of analysis in working all examples, whether simple or complex; and he is often instructed to employ it in Written as well as in Mental Arithmetic. He works by one formula : the order of thinking is prescribed for him to the exclusion of all original methods. The process of reasoning must be reduction to the unit, and the form of expression must be syllogistic. The result is a show of analytic ability and accurate expression, which imposes upon those who are not aware that the minds and tongues of the children have run in the same groove for weeks, so that it requires little or no mental effort for them to fall into it.

Put this kind of analysis to a practical test by giving the above example to a business man. Would he go through such a process of solution, or one at all like it? The boy should have his faculties trained in the kind of exercise that will avail him when he becomes a man; and mature thinking should be direct and economic. Do roundabout reasoning and verbose explanation tend to make thought quick and expression concise? Try a boy, thus trained, with a problem out of the range of his book-questions, and the probability is that he will fail; for he has no ready-made track of formula on which to set his train of thought in motion. This restriction of thought and speech to a single path can yield but a narrow discipline. Originality gets no encouragement. All the members of a class must work by the same process; so that quick-witted pupils are brought down to the level of the dull, when it would seem that the dull should rather be raised toward the level of the quick-witted.

The writer once found several young gentlemen in a normal school engaged in the study of a lesson in Mental Arithmetic. The example just then under consideration was substantially as follows: "If 12 men in 6 days dig a ditch 80 rods long, how many days will it require for 24 men to dig a ditch 160 rods long?" Employing the process of "reduction to the unit,"—the favorite analytic method,—they reached the answer in due time. They were then much surprised to learn that there

was a shorter solution, viz. : "The amount of work is doubled; so is the number of workmen : hence the time required must be the same, *i. e.*, 6 days." Here was a case of normal training into abnormal stupidity. These young men had been drilled for weeks in the exhaustive analytic method, until all ingenuity had died out of them from lack of use. They had been so long picking up with the fingers, that they could not grasp with the hand.

Does any one object that such reasoning is too concise, because young pupils would not easily discover such relations in the conditions of a problem. It seems clear that they should be speedily trained toward this ability. They should be taught to discover relations not obvious, and to invent time-saving combinations, that they may acquire the power of comprehension—that power which masters a subject, not in detail, but at once, by composition, not by decomposition. In mathematics especially the mind should have a way of finding the centre of a problem, whence all its relations may be seen comprehensively. Excessive analysis would take the student round the circumference.

It is hardly necessary to add, that it is not here intended to advise that an extended and particular analysis should never be employed. This is appropriate and necessary in teaching children just beginning the study of numbers, and may occasionally be used with advantage in the instruction of advanced students. But the growing mind should not be kept on this milk-diet. There comes a time when the child needs not count his fingers while adding : so every analysis has its limiting period, when it should become comprehended as something complex indeed, yet single to the conception and to the use of the intellect, so that it may be employed as an element in a higher analysis.

Education in Japan.—Schools are common, and everybody is expected to know what the schools teach. Besides reading and writing, there are taught—what are taught in no other country—deference and a sense of honor. The first insures good manners; the last the hari-kari. Each class is taught only what pertains to the class, trade, or profession. Bookstores abound, and picture-books for children are plentiful; so also are cheap prints. Regular newspapers do not exist. An occasional sheet is published, and sold to meet an occasional want. The better educated and leisurely classes are fond of books and of study, and both men and women read history, astronomy, poetry, novels, and logic. At the religious capital of the empire, Kioto, are schools attended by more than four thousand scholars.

MAY, 1868.

Did You ever Think?

YOU,—young man or woman, in the teens or twenties,—did you ever think? Not very likely. Man is not a thinking being. He only becomes such—no, he may become such—if he tries pretty hard. Out of one hundred folk, perhaps ten think about a thing, two think on it, and not one thinks under it. This under-thinker is one man—sometimes woman—of fifty thousand. He alone should be called a Thinker; and yet to think well *on* a thing is no mean and common feat.

May-be you "write a composition" once a week at school. That is not Thinking, nor is it the short way to make yourself a Thinker; unless it is done otherwise than in any public or private school, except one, that we ever saw. Perhaps you ink up the columns of some weekly gazette or magazine, and get paid for it and puffed in it; and even that is not, as a matter of course, Thinking. Indeed, we have seen men sit in the Jove-like solemnity of Principal or Trustee, brandishing hideous algebraic roots, and launching sesquipedalian thunders at poor boys and girls, agape and aghast; yea, we have known men to print a book—perhaps a score of them—and still prove sorry Thinkers, and even no Thinkers at all.

For what is this act of Thinking?

It is an original, concentrative, exhaustive volition at Thought; a volition, not a mere externally excited spontaneity; exhaustive, not getting nine or ninety of the needed thoughts, but all of them; concentrative, that is, calling forth the really related thoughts alone; and original, which only means getting thoughts at their Origin—namely, Nature (although the like thoughts may have been drawn thence by other minds fifty times before).

You never caught yourself in such an act, did you? Of course not.

You could not stick to it one hour for a diploma or a legacy from a Californian uncle. You would not even know where to begin.

We remember sitting, when young, three hours together before a picture of the death of Raffael. We had heard and read the phrases, "making a study," "handling well a subject," "analyzing the object," and the like, and were emulous to do those things; had rejoiced in Watts and Abercrombie, and perhaps Stewart; and yet, with that long morning's pains and patience, the mountain brought forth to us not even a mouse. We were disheartened. How is this? we asked. But no author, no teacher answered. We were left to grope our dark way toward a glimmer in which, even now, many things are unseen which should be familiar, and neighbor men seem often but as trees walking.

Perhaps you, young reader, are in like case. You would like to analyze the Real—Nature itself, in any of its forms—the landscape, animated creatures, the human soul—and taking any one point in any of these compound forms, discover all its relations. You would like to do this, for and by yourself—for this alone is Thinking, and thus alone are you strong. But you cannot "handle the subject," "don't know what to say."

Let us tell you the difficulty.

You may have had schooling all your life, but you never had half an education. You may tell your father that, when he seeks another teacher for you. If you had been educated, you could now, at sixteen or eighteen, transfer the will methodically and (so to speak) exhaustively through the study of an entire object of matter, and not long after, in due time, through that of an immaterial object.

Your school or college fails in one or both of two points:

First, in mathematic drill; for, how many teachers call out the pupil who misunderstands a proposition or a problem, and work him up to it, perseveringly and patiently and encouragingly, till he understands it? Often teachers cannot, if they would, for pupils are too many and pay is too small. And so, as most do, you may have gone over the six books without going through them. Look at this, if it is your case. See if you can make an affidavit, of your own knowledge, that triangles upon equal bases and between the same parallels are equal to one another, and that any two sides of a triangle are together greater than the third side; and so on with all the propositions.

But though your teacher have thus truly educated you, he has not already done enough. Those mathematics are the mere go-cart of the intellect—useful as a prop to our tottering baby-steps, but to be dropped as soon as one can trudge alone. Problems and propositions in this sensible and breathing world about us, must be wrought out by you; and that without the aid of text-book or lecture. But inasmuch as the mathematics give only general mental quality—namely, concentration and caution—your schooling doubtless fails

Secondly, in Logical drill—that is, methodical exercise in pursuit of the several kinds of Truth. It does not—what it should do—tell you the few different kinds of Thoughts which make up all procurable human knowledge on any or all objects, material or immaterial, and then train you, in regular mode, to their procural. And yet this training may be done, in measure and kind, at any age from twelve to forty. It consists in daily or half-weekly exercise in the act of Thinking, directed by a clear, complete method; the results of the exercise being rigorously compared by the educator with the object itself, the thing thought at, be it a tree, or a horse, or a sofa in your parlor, or the house-cat, or your friend's face, or his mind or heart.

The Objects of thought should be found in nature and in art. The method should give to thought its direct path to those objects, while exercise will steady the steps in that path. Books, meanwhile, are but subordinate. Thus shall you become a Thinker. And an Artist, also, you will become; for Nature always does a twofold work on her disciple—teaching him at once to think and to feel.

> "So build we up the being that we are!
> Thus deeply drinking in the soul of things,
> Shall we be wise—perforce!"

The one object of Mental Education is to make a Thinker—a Truth-getter—whether in Medicine, Carpentry, Trade, Theology, Finance, Law, or Literature. Compared with this potentiality, mere information, however vast, of words or things, is "leather and prunella." Though you should have the languages of Mezzofanti and the learning of Parr, without some high degree of this, you may tear your hair at thirty and hang yourself at fifty for a fool. You ought to, if you don't.

The Professor.

THE title of professor, as appropriated in the scholastic sphere, has a definite meaning still, to those who will take the pains to consider; though the wide-spread corruption of the title has brought it much into disrespect. The greed for money, which is the cause of the larger share of the evil of misplacement of individuals, has not failed to snatch at this hood and to wear it falsely; and not only to wear it falsely, but successfully. Even where the hood fails to hide the charlatan, the charlatan is honored by reason of his wearing the hood. Men are so commonly inconsistent, that they are wont to endure the falsity which they condemn, so long as it holds an honorable name.

And then again, the title is dragged in the dust by a common use among those who teach branches which do not grow out of what might be called the main trunk of knowledge. The original use of the term implies—first, a proficiency in all the learned sciences; and, secondly, a proficiency attained by acquisition and growth in a specialty. The term belongs to the strictly intellectual branches of knowledge. It implies a readiness of insight into the laws of things in general, and a superiority of mastery in the specialty professed—a superiority readily to be manifested in an ability to instruct with accuracy concerning any question that relates to the specialty. The assurance with which some incompetent people assume this title would be amazing, did we not consider how ready the mass of men are either to endure charlatanry or to be its dupe. The evil of the pretension does not rest with the absurd presumption of the professors of gymnastics, or of dancing, or of the tonsorial art. These money-makers are comparatively innocent. We may laugh at a barber who appends Professor to his name. The case becomes somewhat serious when a music-teacher or a high-school instructor, neither of whom has been liberally educated in or out of the schools—for one may graduate without a liberal education, and one may become liberally educated without going to college—pretends to the title of Professor. Here a man who has not exerted intellectual energy to the extent of mastering the learned sciences, who has no growth and learning in a specialty beyond the every-day demands of the drawing-room or the common-school, who can hold no high conversation relative to the facts and laws of any special branch, and whose talk is mostly cant—is too

likely to be regarded, by young and simple folks, as the model from which to draw the conception of what a professor is; and he is likely, also, to find his false hood a protection against the outspeaking critic who may chance to look that way. We know a case where the only argument that was used to retain in position an exposed charlatan, was that he was known publicly by the title of Professor, and therefore that official action would injure him in that character. But these are not the only abuses of this title. The existence of unexposed charlatanry of professorship in higher spheres is unfortunately beyond question. If student criticism is to go for naught, let the sterility of professorial demonstrativeness itself testify. The absence of the manifestation of learning; the want of educational and instructive influence; the destitution of insight, principles, philosophy, and information; the utter ignoring of student individuality; the wasteful use of the mechanical memory; the vain round of sameness in questioning; the drudgery of the recitation-room,—these are witnesses.

A Review and a Remonstrance.

THE *N. Y. Times*, in its review of the Report of the Superintendent of our city schools, says:

"The practicability of dispensing with corporal punishment, as a mode of school discipline, except in extreme cases, is made evident by the report."

All good schoolmasters will agree to this: Corporal punishment may be dispensed with, *with exceptions*. Perhaps, however, it would be more logical to express the fact thus: "There are cases in which corporal punishment may *not* be dispensed with."

As an evidence against the need or propriety of corporal punishment in schools, such statements are unworthy of attention.

The reviewer quotes approvingly the law which prohibits corporal punishment in all the evening, primary, and female schools and departments, and allows it to be inflicted in the others only by principals, and by them "only when all other means of discipline have proved unavailing." The public is not told what is done in evening, primary, and female

schools, when all other means of discipline have proved unavailing; and it is also left in the dark as to the precise period when the whipping age of boys commences.

The tendency of this regulation is exceedingly pernicious—

First: Because the laws of a school, like the laws of a State, should not make invidious distinctions; and,

Second: Because submission to proper authority and obedience to law are lessons which it is a child's interest to learn as early as possible. It might not be amiss to refer the question of the proper time to begin these lessons to a jury of mothers. The pat of a loving parent's hand may accomplish results in a two-years' child, which a dozen severe whippings would not effect in a youth of fourteen. Very slight punishments, firmly and tenderly administered, in the primary department, might have saved from evil courses many a youth who now cannot be controlled either by the ferule or the law.

As it is, the children are not to be punished until they have arrived at an age when only severe chastisement will produce any effect; and if the teacher attempts that, he subjects himself to removal.

But this is not the only evil effect of the prohibition of corporal punishment in the schools. By withholding confidence in the primary teacher's discretion, she is degraded before her pupils. The law makes her the passive recipient of insults which itself provokes. "Who cares for you? You das'n't touch me!" is the insolent retort that more than one teacher has had to submit to.

Power for good may indeed be abused for evil; but there are fewer chances of abuse of power on the part of the teacher, than there are certainties of evil results from publicly stripping her of that power which is just and necessary, not only for the correction of wrong-doing, but for the prevention of it. We are no advocates of frequent or indiscriminate flogging. But we do not believe in breaking the arms of all the teachers because of an unworthy few. And in spite of the faith of Mr. Randall—in whose mind a pretty theory outweighs a multitude of facts—we are constrained to believe that the regulation is working more evil than good. The preponderance of testimony, from teachers and experienced school-officers, is against it. And the increasing lawlessness of pupils sadly weakens "the most gratifying assurance" which, according to the Report, we ought to have of its expediency and practicability.

Mr. Benson and his Geometry.

If our review in the February number of The Monthly seemed to the reader to need any justification, it can surely require none when the reply over the geometer's own signature shall have been compared with the article it professes to answer.

We have no reply to make to Mr. Benson's first complaint, except to reassert more fully the opinion briefly expressed in the first article—that the statement that "equal arcs *subtend* equal angles" is not a definition—it is not an axiom, and, we will add, it is not given as such in Professor Docharty's Geometry.

But our review of Mr. Benson's boasted discovery is the point he evidently considers of the most importance; and he meets it by proposing to investigate a law well known to mathematicians, and upon which, as it was incidentally quoted, he says the whole objection to his *demonstration* depends. But he fails to investigate it. He stops short, and demands a demonstration from us. Now, there are several answers to be made to this evasion and demand: 1st. The law known as Guldinus's or Guldin's properties does not in any way depend upon any relation between the diameter, circumference, and area of the circle. It simply involves the area of the *section*, and the path described by its centre of gravity, whether that path be a curve of any kind or not, provided only that the section be perpendicular to the path throughout the generation.

2d. If the statement that "sections of equal solids of revolution are equivalent only when the centres of these sections describe equal paths" is untenable, what becomes of Mr. Benson's conclusion (page 217), that "equivalent surfaces upon the same radius will generate equivalent solids"?

3d. We offer a brief outline of the demonstration called for.

Let r be the radius of a circle, a its area, and c its circumference: then if $x = \frac{a}{r^2}$ and $y = \frac{c}{2r}$, x is to be shown to be equal to y.

In Benson's Geometry, Book 5, Prop. 20th, we find the correct formulas for estimating the areas of circumscribed and inscribed polygons about the circle. By making the usual substitutions, we find that the regular polygon of 8192 sides, circumscribed about a circle whose radius is unity, has an area of 3.1415928+, while the area of the inscribed polygon of the same number of sides is 3.1415923. Now, the area of the circle is expressed by a number between these two numbers, or in the equation $x = \frac{a}{r^2}$, $x = 3.141592$ to within less than one-millionth. (This differs from Mr. Benson's conclusions in the Sixth Book, but such discrepancies are common in his remarkable work.)

Again, in Smith's translation of Blanchet's Book IV., Prop. 16, we find the formulas for determining the radii of circumscribed and inscribed circles about isoperimetrical regular polygons. If r and R be respectively the radii of inscribed and circumscribed circles about any regular polygon, and r' and R' the radii of circles similarly described about a polygon of equal perimeter, but twice the number of sides, then

$r' = \frac{R+r}{2}$ and $R' = \sqrt{R \times r'}$. By making successive substitutions, as in the former case, we find in the case of the polygon of 8192 sides, and whose perimeter is 4, the radii of both circumscribed and inscribed circles are expressed by the same figures to the seventh place of decimals; .6366196+. But the circumference of one of these circles is more than 4, while the other is less than 4. The circle, therefore, whose circumference is 4 has a radius whose value lies between the values of the radii expressed above; and is equal to .6366196, true to the last place of decimals. In the equation $y = \frac{c}{2r}$ we get $y = 3.141592$ to within less than $\frac{1}{1000000}$: x therefore differs from y by less than $\frac{1}{6000000}$, when the radius of the circle is unity. It is easy, by continuing the processes above, to prove a nearer equality of x to y.

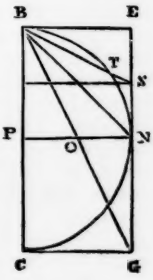
Now, this is the demonstration demanded by Mr. Benson. It is a demonstration by the direct method (not Benson's). It proves that the ratio of the diameter to the circumference, and the factor by which we multiply the square of radius to obtain the area of the circle, differ from each other by a quantity too small to be measured.

Now, the part of the above demonstration which proves the greatest stumbling-block to Mr. Benson, is the part taken from Benson's Geometry. For, by comparing the 20th proposition in the Fifth Book and the remarkable proposition in the Sixth Book, we learn that it is Mr. Benson's opinion that the circle may be smaller than a regular polygon inscribed in it.

The one difficulty of Mr. Benson's mind is that it admits of no conception of the true meaning of *approximation*. To him it means any given amount of error.

Prove to him, by the most rigorous methods, that a certain line is ten feet long to within one-tenth of an inch, and an error of an entire foot is to his mind a possibility.

There is one more point in Mr. Benson's article that requires notice, inasmuch as he replies to the former criticism by an equivocation. In the February number we employed Mr. Benson's method to prove that the cone generated by the triangle BCG is one-half the cylinder generated by BEGC.



Mr. Benson says in answer to this that we took the wrong axis. We reply, that the axis taken, BC, was the axis selected by Mr. Benson himself, and is the only one mentioned in the numerous references to this proposition; and we assert now that Mr. Benson has no escape from the conclusion, ridiculous as it is, that the cone generated by BCG is one-half the cylinder generated by BEGC, provided only that the figures be revolved in the manner employed by Mr. Benson in the demonstration wherein he concludes the segment BN and triangle BSN equal.

But he furthermore objects that in this demonstration we institute comparison between heterogeneous quantities. That the solids compared are not heterogeneous, every reader will see at once. Mr. Benson gets to his conclusion in the famous corollary by just such comparisons;

and also on page 217, in referring to this same diagram, he says: "The solid generated by the segment BT is equivalent to the solid generated by the figure TSN."

To such narrow straits may one be reduced who has an error to defend and a bad book to sell.

But we have given more than an enough space to this remarkable piece of quackery. Even if the pretentious talk about squaring the circle were eliminated from the book, and genuine demonstrations substituted, it would still be undeserving the notice of teachers. There are many degrees of worthlessness between Benson's Geometry and a book fit for use in schools.

The mild hallucination enjoyed by Mr. Benson, which holds him in the belief that his peculiar notions have been endorsed by competent judges, is also shared by all the inventors of perpetual motion we have ever met. As there are one or two of these last-named gentlemen about town at present, we are not quite free from anxiety lest they should stray into the rooms of the Board of Education, or obtain certificates from the professors of New York College. We do not see, either, how these gentlemen can withhold "valuable suggestions" from the astrologers of the Bowery and Seventh avenue, if they apply for them.

The fact that Mr. Benson labors under a mild form of craziness, we will allow to account for the wide discrepancy we find between his statements, that his quadrature notions were endorsed by certain mathematicians, and the best information we can gather from the sources to which both the circular and book directed our attention.

EDUCATIONAL INTELLIGENCE.

UNITED STATES.—A prominent member of the late Board of Education of NEW HAMPSHIRE writes us that the remarks on the condition of education in that State, in the March number of THE MONTHLY, "while generally very just and well deserved, are not quite accurate in two particulars, which are important to those concerned." We spoke of the county commissioners as constituting a State Board of Education. This is no longer the case. The office of County Commissioner was abolished by the Legislature last summer. "The Governor and Council, a body of politicians, now constitute the Board of Education; and those of us who were County Commissioners and did our work of visiting, lecturing, and holding conventions, as faithfully as the laws enabled us, object to being chargeable with the acts of the present board." The recommending of text-books is no longer, as we said, a part of the duty of the State Board. "If the State Superintendent or Governor and Council have been induced to recommend books, the former commissioners are not in fault. The authority lies only with the superintending School Committees of the towns and cities." The last report of the Secretary of the Board of Education was rendered last June, before the change above noted was made. According to this report, the number of pupils of four years of age and upward, attending school not less

than two weeks, was 77,847, nearly two thousand less than the number reported for the preceding year; and there has been a corresponding yearly decrease since 1860. This, the secretary claims, is not due to pupils' leaving school at an earlier age than formerly, nor to emigration to the West, but to the "alarming fact" that there are fewer children born than there used to be. The value of the statement might have been made more certain by figures showing the actual number of children in the State. It is possible that the falling off may be in the public schools and not in the families. The number of common schools was about 2,300, and the average daily attendance 53,000, a little more than for the year before. The average length of school was nearly nineteen weeks. 2,814 children, between four and fourteen were reported as not attending any school,—probably much less than the actual number. No report is given of those attending private schools. 3,918 teachers were employed, of whom 501 were men. The average wages of the male teachers was $33.09 per month; of female teachers, $18.44. The appropriation for school purposes was $290,307, or $3.37 for each scholar reported. The condition of the schools and school-houses is far from satisfactory. Truancy is increasing. The best teachers of the State are leaving it; and instead of rousing the people to greater exertion, the authorities cry for help from the General Government. "Impressed with the need of more ample school-funds, and considering the fact that the Western States possess such funds, to the value, in some cases, of several millions, arising from lands donated to them by the Government of the United States, ... this Board feel that, in equity, our State is entitled to a grant of the public lands, the avails of which shall be devoted to the interests of the public schools." In another place this plea is made very pathetic, after this fashion: "If the younger son has the fatted calf, the older son, who has always stayed at home and never rebelled, and worked hard on the farm to support the family, ought at least to have a kid." We trust that Congress will do something handsome for this dutiful son; and that right speedily, or it will be too late. If the decline of the past few years is suffered to continue for a generation, the schools of the State will be dead beyond resuscitation. There will be no children to teach. NEW YORK.—The number of children between five and twenty-one years of age, according to the Superintendent's Report for 1867, is 1,376,982; the number attending school, 949,203; the average daily attendance, 419,957. These numbers are somewhat larger than those for 1866. Yet there is room for still greater improvement. The entire attendance at educational institutions was, in colleges, 2,100; academies, 34,661; private schools, 72,201; common schools, 949,203: total, 1,058,165. In this total are no doubt included many names of those attending different schools during the year, and thus counted two or three times. The academies seem to be declining; all the other schools show an increase in attendance. The average time that schools were taught was thirty-three weeks and three days, in the country; and forty-one weeks and four days in the cities,—a slight increase in the length of country schools, and a falling off of ten days in the city schools. The number of teachers employed was 26,489; males, 5,271; females, 21,218. Last year there were 5,062 males to 21,432 females. The amount expended for teachers' wages was $4,826,471, an increase of over a quarter of a million dollars. The expenses of the

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schools for the year was $7,683,201, an increase of $1,050,265. The amount expended for the erection and improvement of school-houses, was $1,713,107, seventy-six per cent. over the amount expended the previous year. The libraries are declining. The annual appropriation for them is $55,000; yet the number of volumes reported is some 80,000 less than in 1866. Less than half the appropriation was applied to the purchase of books, the rest going for teachers' wages. In contrast with this we have the large expenditure of $211,665 for scientific apparatus; $177,096 being paid for apparatus by this city alone. The Superintendent recommends a tax for five successive years of one-eighth of a mill on each dollar of taxable property in the State, for the purpose of aiding in the erection and improvement of school-houses. He also recommends the creation of the office of "*School Visitor*," the position to be filled exclusively by women, whose duty shall be to visit and inspect the district schools, inquiring into the comfort of pupils (with an indefinite "etc."); seeking out absentees, ascertaining the causes debarring poor children from attendance, and making annual reports and recommendations to the School Commissioners. A well-digested scheme of this sort, well carried out, would undoubtedly be productive of good.

INDIANA.—From the Indiana *School Journal* we obtain the following statistics for the school year ending September 1, 1867. The figures for the preceding year are from the last (1866) Biennial Report of the State Superintendent. The number of children of school age (between six and twenty-one) was 577,009, an increase of 17,231. The number enrolled in the schools was 415,796, an increase of 12,984. The number of teachers was 10,053,—males 6,012, females 4,041. The whole number shows an increase of 537, while the number of female teachers is less by 122 than in 1866. The average monthly wages of teachers was: men—high school $69.40, primary $36.80; women—high school $37.40, primary $29. These rates are somewhat better than obtained in 1866, the principal increase being in the wages of female teachers. The number of school-houses reported is 8,360, of which 1,063 are built of logs. The estimated value of school-houses, furniture, and apparatus, is $5,078,346, an increase of $562,612. The total amount of school funds held by the State, January 14, 1868, was $8,194,981.21, of which $7,053,467.90 were productive. The length of term of school was four months. The number of teachers licensed for the year ending May, 1867, was 7,565.

NEW BRUNSWICK.—The Education Report for 1867 gives the number of schools in the province as 797 in winter, and 847 in summer; a slight advance on 1866. The number of pupils was, in the winter term, 28,231, an increase of 422; in the summer term, 30,871, an increase of 1,090. Of the teachers employed, about three-fourths were persons regularly trained for the work. This speaks well for the schools. The expenditure from the Provincial treasury for educational purposes was $93,883.56, an increase of $576.64. The amount raised for salaries by local subscriptions, tuition fees, etc., was $107,441.64. The grants for the present year amount to $133,644.40. Direct taxation and free schools are advocated by the Superintendent as the only certain road to the speedy removal of the impediments which lie in the way of a more rapid development of their educational system.

GREAT BRITAIN.—The number of children on the books of the schools inspected during the year ending August 31, 1867, was, in England, 1,376,882; and in Scotland, 216,030. The number of children belonging to families which were returned by the school managers as "above the class who support themselves by manual labor," was 17,567. The number of children paying school fees not exceeding 4 *d.* per week, is given as 1,348,576 in England, and 16,629 in Scotland. The number whose school fees exceeded 4 *d.* per week was, in England, 36,306, and in Scotland 16,629. The total number of schools of all denominations visited on account of annual grants, was 6,443 in England and Wales, and 1,466 in Scotland; and of schools visited for inspection only was 82 in the former, and 11 in the latter. A true college for women is talked of, and the project is in a fair way to be carried out. It is designed to build from a higher basis than those now known as ladies' colleges have been able to insist upon. The students will not be girls, but women, who, having passed through the ordinary school routine, are desirous of prolonging their studies. The course will extend over a period of three years, but only half of each year will be spent in the college. The studies to be pursued will cover a wide range, including of course all those which usually form a part of the education of an English lady; but no student will be allowed to attend more than a prescribed number of classes. To insure the testing of the pupils by competent authority, "application will be made to the University of Cambridge to hold examinations at the college in the subjects prescribed for the ordinary degree." Men of the highest mark, men conspicuous for sobriety of mind and earnestness of purpose, are giving their best thoughts and wishes to this movement; and among the ladies on the General and Executive Committee are names almost, if not quite, as conspicuous.

FRANCE.—The Minister of Public Instruction has created, at the new technical Normal School at Cluny, a special section for modern languages. Heretofore the teaching of modern languages in France has been of the most superficial and unsatisfactory kind, and no normal school has existed for the training of teachers in this branch of education. The course of study in the new section will be of the same duration as that of the section of sciences—namely, two years; but after the expiration of that period of study, and practice in the college annexed to the normal school, the pupil-teachers are to be sent for a year to the country whose language they profess to teach, and will be required to write every week to their professor in that language. The pupils are to be placed in public schools, so that they may not only complete their knowledge of the language of the country, but also study its method of teaching, and pursue their general studies.

ITALY.—The condition of primary education in Italy is discussed at length by a correspondent of the *Nation*. The facts show that the spasmodic interest awakened by the statistics published in 1865 by Signor Natoli, then Minister of Public Instruction, passed away without effecting very great results. Italy still stands last in Europe on the educational map—even below Spain. Yet some progress is visible; the increase on 1863 being, for city schools, 27 per cent.; for rural schools, 3 per cent.

According to the law of 1859, elementary education is divided into two grades, inferior and superior, the former comprising religious teaching, reading, writing, arithmetic, and the Italian language; the latter, in addition to these branches, composition, book-keeping, elementary geography, elements of natural history and of the natural sciences—each course to occupy two years, and no child under six to be inscribed as a regular pupil. Schools in which these courses can be gone through are to be established gratuitously in every commune. Even a village or fraction of a commune, containing fifty children of either sex, is to have at least an elementary school for the inferior course. Parents or guardians are bound to send their children to these schools, or to prove that they are otherwise educated. The law of 1865 renders it obligatory for the communes to provide the funds for these schools; the intention of the legislators evidently being to provide free elementary education for every child in the kingdom. This intention has been but partially carried out, the chief obstacle seeming to be the indifference of the people. Three hundred and seventy-six communes are still without any sort of school, public or private; 461 are without public schools for males; and 1,844 are without public or private schools for females. Out of a population of 4,893,373 children, but 1,307,217 attend school. The whole number of elementary schools, private and public, is 31,804; one private to four public, and two for girls to three for boys. There are 2,720 infant schools (in which "instruction is never expected and rarely given"), attended by 107,512 out of 1,665,136 children between two and five years old. Besides these there are 4,556 schools for adults, open Sundays or evenings, attended by 164,570 pupils, who receive instruction without charge; and 135 normal schools, attended by 7,083 pupils, of whom 4,365 are women. Taking the whole number of schools in proportion to the entire population, there is one school for every 667 inhabitants; the proportion varying between Piedmont, with a school for every 384 inhabitants, and an attendance of 78 per cent.; and Basilicata Sicilia, with one school to 1,660 inhabitants, and an attendance of 12 per cent.

CURRENT PUBLICATIONS.

THE science of comparative philology is one of extremely recent date, and its friends and admirers may be said to be even yet confined to a select few. But those friends are steadily increasing in number, especially in this country. This is evident from the multiplication among us of works on language, and the readiness with which they find their way among the intelligent reading masses. Of these works, the latest,[1] and, in our judgment, the best and most satisfactory, is that of Professor Whitney of Yale College.

The volume opens with a brief statement of the history and objects of linguistic science. Then follow interesting inquiries concerning the

(1) LANGUAGE AND THE STUDY OF LANGUAGE. By WM. D. WHITNEY. New York: C. Scribner & Co. Price, $2.50.

reasons of our speaking as we do rather than in some other tongue, and concerning the nature and composition of a language, and the means of its support and transmission. Around these questions the discussions that follow are, in fact, made to cluster. The doctrine of Max Muller, that language is a living, growing organism, and the science of language a physical science, is ably controverted. Language is shown to be a human production rather,—an institution,—and its study a moral science. The phonetic and significational changes to which it is subject, are discussed in a manner that cannot fail to interest the general reader. The growth and fusion of dialects, and the causes thereof, are fully and clearly presented, and largely and happily illustrated. The English language is shown to be one of the Germanic group of dialects, which itself is a member of a wider family—the Aryan, or, as Professor Whitney more appropriately styles it, Indo-European—embracing nearly all the languages of Europe and a portion of those of Asia. The correspondences among these languages, and their common origin in some locality and at some period not determinable, also claim the author's attention, and give occasion for an admirable display of his candor, modesty, and love of truth. The other great families of language are next made to pass cursorily in review in the order partly of their importance and partly of their habitat. The value of language, its origin, its relations to thought, and the benefits and history of the art of writing, are among the other topics of interest of which the author treats.

To ordinary readers, perhaps the most attractive of the twelve lectures of which the volume consists, are the first five, the seventh, and the last two. On the origin of language the author is clear, convincing, and consistent with himself. The key-note of the book is, that language is the work of those whose wants it subserves, the product of a series of changes effected by the will and consent of men, and that its conservation and control are wholly in their hands. Hence, we are not unprepared, on nearing the close of the volume, to find the author rejecting the once very generally accepted dogma of the divine origin of language, and saying, "Throughout its whole traceable history, language has been in the hands of those who have spoken it, for manifold modification, for enrichment, for adaptation to the varying ends of a varying knowledge and experience; nineteen-twentieths, at the least, of the speech we speak is demonstrably in this sense our own work: why should the remaining twentieth be thought otherwise? . . . The power which originates is not to be separated from that which maintains and develops: both are one, one in their essential nature, one in their general mode of action." —pp. 399, 400. In regard to reforming the orthography of the language, Professor W. may be thought to be ultra. He deems it not only unobjectionable but desirable, though at present impracticable. He says, p. 469, "We do not gain a straw's weight of advantage in the occasional distinction to the eye of words which are of different signification, though pronounced alike: our language is not so Chinese in its character as to require aid of this sort; our writing needs not to guard against ambiguities which are never felt in our spoken speech; we should no more miss the graphic distinction of *meet, meat,* and *mete,* of *right, wright,* and *rite,* than we do now that of the two *cleave's* and *page's,* the three or four *found's* and *sound's,* or the other groups of homonyms of the same class." At the same time, he adds, "It may well be the case that a

thorough reform of English orthography will be found forever impracticable; it certainly will be so, while the public temper remains what it now is."

The volume, as a whole, displays a very commendable degree of thought, research, care, and candor. And yet we find here and there a remark, thrown out seemingly without due consideration. We are not quite sure that we understand the author's meaning in the note on p. 43, when he says, "The only English word in which *ei* has the long *i* sound is *height*." We agree with him that *either* and *neither* do not properly possess it. But are not *eider*, *kaleidoscope*, *oneiromancy*, *sleight*, and other words that might be mentioned in which *ei* has the long *i* sound, "English" words? On p. 56 he says, "They who first ventured to say, *I breakfasted*, were guilty of as heinous a violation of grammatical rule, as he would be who should now declare *I takedinnered* instead of *I took dinner*." We think not. We have no such noun as *takedinner*. But before the verb *to breakfast* was known, the noun *breakfast* was in use, from which it was formed, just as the verb *to face* was formed from the noun *face*. We are aware that Johnson and others say, the noun *breakfast* is from the verb. But the truth is, the noun *breakfast* was used, and occurs in English literature, again and again before the verb *breakfast*. If the author had said, that the first user of *breakfast* as a verb, was guilty of as heinous a violation of the law of linguistic development, as he would be who should now venture to say *I pickpocketed him*, or *They cutthroated him* for *I picked his pocket*, or *They cut his throat*, we should have admitted the truth of his conclusion, and said nothing. *Breakfasting* for *breaking fast*, or, as we should now say, *taking breakfast*, is only like the now obsolete word, *findfaulting* for *faultfinding*.

These, however, are but as specks upon the sun's disk. They detract not from the value and general reliability of the volume, which is truly a noble work. Its style is remarkable for clearness, fluency, and correctness. The language is plain and familiar rather than metaphysical and technical; its method, analytic rather than synthetic. The least we can say of it is, that it reflects credit of no questionable character on both the head and the heart of its author, and is an honor to American scholarship.

An admirable little book is Dr. French's "First Lessons in Numbers."[1] In the first place, it is full of pictures, which are real pictures, not unmeaning scratches; and these pictures form the basis of the lessons. In the second place, the lessons are mainly about things, not about values or other abstractions; and the method pursued is simple and natural. Every new combination of numbers is introduced, first, either in connection with the picture of an object or with the name of some object familiar to the pupil, and which the teacher may in most cases be able to place before him; second, in connection with the names of familiar objects not in sight; and third, with abstract numbers. Thus, by the time the pupil reaches the tables of Addition, Subtraction, Multiplication, and Division, he will have had all the combinations presented to him at least three times, and in accordance with the natural order of mental development: namely, first, Perception; second, Conception; third, Abstraction. The usual forms of answer and solution, remarks, etc.,

(1) First Lessons in Numbers. By John H. French, LL.D. New York: Harper & Bros.

are omitted from the body of the book, and given at the end as a Reference Manual for the teacher, in the form of hints and suggestions. These are eminently sensible and practicable. As a rule, the book is clearly, simply, and sensibly written.

Receiving children of every parentage, our public schools not unfrequently afford a perfect Babel of brogues. A dozen languages may be represented in a single class, and not one of them "English undefiled." Even where the children are native born, their speech is not always free from congenital or dialectic peculiarities, which need to be eradicated. To effect this, to reduce the brogues and twangs and lispings and stammerings which children are heir to, to conformity with the usages of the English tongue, there is nothing like persistent drilling on the elementary sounds while the vocal organs are young and flexible. In schools where this is properly attended to, children of every sort are received with all their natural or acquired habits of mispronunciation, and turned out speaking English as though to the manor born. Of the various contrivances for assisting and guiding the teacher in these exercises, we know of none better adapted to meet the wants of both pupils and teachers than the "Phonic Charts,"[3] prepared by Mr. Calkins. These consist of eleven charts, 18 by 28 inches. No. 1 contains a brief treatise on the Sounds of the Language, showing, What they are, Why they should be taught, and How to teach them. No. 2 is devoted to the letter *a*, its sounds and the way to teach them; Nos. 3 and 4, to the remaining vowels and diphthongs; the succeeding charts, to the 8th, treat of the consonants; the 9th and 10th to digraphs and their equivalents; and the 11th completes the directions for using the charts, and closes with a few words on the classification and names of sounds. Mr. Calkins adheres to the common or alphabetical classification, where we should have adopted the natural or organic; still, for the purpose intended, perhaps the choice he has made is the best. The arrangement of representative words and the directions given for using the charts are so simple, that teachers who have never paid any attention to phonetics, can find no difficulty in using them correctly and profitably. The method of mounting is quite ingenious; and as it enables the charts to be sent by mail, they will doubtless enjoy a much more extensive use than would otherwise have been possible.

The new edition of Haswell's Pocket-Book[4] contains the most complete set of tables and formulas of any of the various books in use. It contains nearly four hundred pages more than the old edition of the same work, with which engineers and mechanics have been so long familiar. The present edition contains the results of recent experiments upon woods, cements, and metals, and includes, moreover, a complete treatise upon hydraulics. There is much matter, also, of general utility, and for which everybody has sometime felt the need; such as, agricultural notes,—geographical distances,—latitudes and longitudes,—weights and values of foreign coins; besides a large collection of receipts of a miscellaneous character. The Index fills eleven closely-printed pages.

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(3) Phonic Charts, for Self-Instruction in the Sounds of Language. By N. A. Calkins. New York: Harper & Brothers.

(4) Engineers' and Mechanics' Pocket-Book. By Charles H. Haswell. New York: Harper & Brothers.

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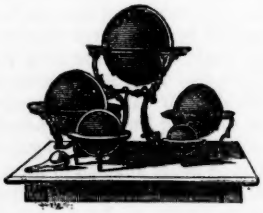

If they were useful for no other purpose than for laying a sure foundation for a right understanding of Geography, they would be entitled to the first rank among the most valuable articles of school apparatus ever invented. With them the teacher of Geography may begin objective instruction at the outset, showing to the pupils the things themselves, not more or less inaccurate pictures which the well-trained mind may *imagine* to represent them. The pupils thus learn not merely the names of geographical lines, but what they are, what they are for, and how to draw them; and what is still more to the point, how to draw *by* them. Map-drawing with this basis becomes intelligent work, not mere mechanical transferring of unmeaning marks from one paper to another.

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